

## **IN THE SPECIFICATION**

Add a new paragraph at page 1, after the title and insert new section headings and subheading as follows:

### **CROSS REFERENCE TO RELATED APPLICATION**

This application is a national phase application based on PCT/IT2003/000706, filed October 31, 2003, the content of which is incorporated herein by reference.

### **BACKGROUND OF THE INVENTION**

#### **Field of the Invention**

Page 1, before line 7, add the following new subheading:

#### **Description of the Related Art**

Page 2, before line 9, add the following new section heading:

### **SUMMARY OF THE INVENTION**

Page 3, lines 6-24, delete the three (3) paragraphs starting with "According to a first aspect..." and ending with "... claim 51 also forms a subject of the invention.", in their entirety and substitute new paragraphs therefor as follows:

According to a first aspect of the present invention, there is provided a method for determining the roughness of a rolling surface of a tyre (11), comprising the steps of:

providing a first signal (Sa) representative of the motion of at least one point (P) of the tyre during its rolling on the surface; and

processing the first signal for providing an output (OU<sub>L</sub>) indicative of the roughness of said rolling surface of the tyre. In accordance with a second aspect of the

present invention, there is provided a method for controlling the behaviour of a vehicle to which at least one tyre is mounted, comprising the steps of:

determining an information relating to the roughness of a rolling surface of the tyre (11) in accordance with the foregoing method and making available the information relating to the roughness to a vehicle control system. In its preferred form of execution, said control system is an ABS (Anti Blocking System) system.

In accordance with a third aspect of the invention, there is provided a system for determining the roughness of a rolling surface of a tyre (11) to be mounted onto a vehicle, the system being operatively associable with the tyre and comprising:

a sensor device for providing a first signal (Sa) representative of the motion of at least one point (P) of the tyre during the rolling of said tyre on a surface having a respective roughness,

characterised in additionally comprising a processing stage (51, 2) of the first signal for generating an output (OU<sub>L</sub>) indicative of the roughness of said tyre rolling surface.

In a fourth aspect of the invention, there is provided a tyre (11) for a vehicle, comprising a sensor device (3) operatively associated with the tyre for providing a first signal (Sa) representative of the motion of at least one point (P) of the tyre during the rolling of said tyre on a surface having a respective roughness,

characterised in that said sensor device comprises a processing stage (51) of the first signal for generating an output (OU<sub>L</sub>) indicative of the roughness of said tyre rolling surface. In another aspect of the present invention, there is provided a

wheel comprising a supporting rim (12) and a tyre (11), as discussed above, associated with said supporting rim.

Page 3, before line 25, add the following new section heading:

BRIEF DESCRIPTION OF THE DRAWINGS

Page 5, before line 8, add the following new section heading:

DETAILED DESCRIPTION OF THE INVENTION